

CLAIMS

1. A method for identifying transmitters in a wireless communication system, comprising:
 - obtaining a plurality of received signals for a plurality of transmitters; and
 - determining a transmitter for each received signal by
 - determining a list of candidate transmitters for the received signal,
 - obtaining predicted power for each candidate transmitter in the list, and
 - identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal.
2. The method of claim 1, wherein the determining the transmitter for each received signal further includes
 - comparing the predicted power for each candidate transmitter against the measured power for the received signal, and wherein the identified transmitter for the received signal is the candidate transmitter with predicted power closest to the measured power.
3. The method of claim 1, wherein the determining the transmitter for each received signal further includes
 - determining a coverage zone to use for the received signal, and wherein the predicted power for each candidate transmitter is obtained based on the coverage zone.
4. The method of claim 3, wherein the predicted power for each candidate transmitter is obtained for a centroid of the coverage zone.
5. The method of claim 3, wherein the coverage zone is derived based on one or more coverage areas of one or more identified transmitters.
6. The method of claim 1, wherein the predicted power for each candidate transmitter is determined based on a path loss prediction model.

7. The method of claim 6, wherein the path loss prediction model is based on Okumura-Hata model.

8. The method of claim 1, wherein the predicted power for each candidate transmitter is determined based on field data.

9. The method of claim 1, wherein the wireless communication system is a CDMA system.

10. The method of claim 9, wherein the list of candidate transmitters for each received signal is a list of base station transceivers (BTSs) with same PN offset.

11. The method of claim 1, wherein the determining the transmitter for each received signal further includes

obtaining predicted propagation delay for each candidate transmitter in the list, and

wherein the transmitter for the received signal is further identified based on predicted propagation delays for the candidate transmitters and measured propagation delay for the received signal.

12. The method of claim 11, wherein the determining the transmitter for each received signal further includes

determining a power delta for each candidate transmitter as a difference between the predicted power for the candidate transmitter and the measured power of the received signal,

determining a propagation delay delta for each candidate transmitter as a difference between the predicted propagation delay for the candidate transmitter and the measured propagation delay for the received signal, and

obtaining a weighted sum of the power delta and the propagation delay delta for each candidate transmitter, and wherein the identified transmitter for the received signal is the candidate transmitter with a smallest weighted sum.

13. A method for determining transmitters in a wireless communication system, comprising:

- obtaining a plurality of received signals for a plurality of transmitters; and
- determining a transmitter for each received signal by
 - determining a list of candidate transmitters for the received signal,
 - obtaining predicted power for each candidate transmitter in the list,
 - obtaining predicted power for an identified transmitter,
 - determining the transmitter for the received signal based on predicted powers for the candidate transmitters, the predicted power for the identified transmitter, measured power of the received signal, and measured power for the identified transmitter.

14. The method of claim 13, wherein the determining the transmitter for each received signal further includes

- comparing a relative predicted power for each candidate transmitter against a relative measured power for the received signal, the relative predicted power being a difference between the predicted power for the candidate transmitter and the predicted power for the identified transmitter, the relative measured power being a difference between the measured power of the received signal and the measured power for the identified transmitter, and

- wherein the identified transmitter for each received signal is the candidate transmitter with relative predicted power closest to the relative measured power.

15. The method of claim 13, wherein the determining the transmitter for each received signal further includes

- determining a coverage zone to use for the received signal based on one or more coverage areas of one or more identified transmitters, and wherein the predicted power for each candidate transmitter is obtained based on the coverage zone.

16. The method of claim 13, wherein the wireless communication system is a CDMA system.

17. The method of claim 13, wherein the determining the transmitter for each received signal further includes

obtaining predicted propagation delay for each candidate transmitter in the list, and

obtaining predicted propagation delay for the identified transmitter, and

wherein the transmitter for the received signal is further identified based on predicted propagation delays for the candidate transmitters, the predicted propagation delay for the identified transmitter, measured propagation delay for the received signal, and measured propagation delay for the identified transmitter.

18. The method of claim 17, wherein the determining the transmitter for each received signal further includes

determining a relative power delta for each candidate transmitter,

determining a relative propagation delay delta for each candidate transmitter, and

obtaining a weighted sum of the relative power delta and the relative propagation delay delta for each candidate transmitter, and wherein the identified transmitter for the received signal is the candidate transmitter with a smallest weighted sum.

19. An apparatus operable to identify transmitters in a wireless communication system, comprising:

means for obtaining a plurality of received signals for a plurality of transmitters;

means for determining a plurality of lists of candidate transmitters for the plurality of received signals, one candidate list for each received signal;

means for obtaining predicted power for each candidate transmitter; and

means for identifying the transmitter for each received signal based on measured power for the received signal and predicted powers for the candidate transmitters in the list determined for the received signal.

20. The apparatus of claim 19, further comprising:
means for determining a coverage zone to use for each received signal, and
wherein the predicted power for each candidate transmitter of each received signal is
obtained based on the coverage zone for the received signal.

21. The apparatus of claim 19, wherein the predicted power for each
candidate transmitter is determined based on a path loss prediction model.

22. The apparatus of claim 21, wherein the path loss prediction model is
based on Okumura-Hata model.

23. The apparatus of claim 21, further comprising:
means for storing information used for the path loss prediction model.

24. The apparatus of claim 19, further comprising:
means for obtaining predicted power for an identified transmitter for each
received signal, and wherein the transmitter for each received signal is further identified
based on the predicted power for the identified transmitter for the received signal.

25. The apparatus of claim 19, further comprising:
means for obtaining predicted propagation delay for each candidate transmitter,
and

wherein the transmitter for each received signal is further identified based on
measured propagation delay for the received signal and predicted propagation delays for
the candidate transmitters in the list determined for the received signal.

26. The apparatus of claim 19, wherein the wireless communication system
is a CDMA system.

27. A computer program product for identify transmitters in a wireless
communication system, comprising:

code for obtaining a plurality of received signals for a plurality of transmitters;

code for determining a plurality of lists of candidate transmitters for the plurality of received signals, one candidate list for each received signal;

code for obtaining predicted power for each candidate transmitter;

code for identifying the transmitter for each received signal based on measured power for the received signal and predicted powers for the candidate transmitters in the list determined for the received signal; and

a computer-usable medium for storing the codes.